

ABSTRACT:

The electric lamp comprises a lamp vessel (1) which is transparent to visible light and which accommodates a light source. At least a part of the lamp vessel (1) is covered with a light-absorbing coating (3). According to the invention, the light-absorbing coating (3) comprises a network which can be obtained by conversion of an organically modified silane by a sol-gel process. The organically modified silane is selected from the group formed by compounds of structural formula $R^I\text{Si}(\text{OR}^{II})_3$, wherein R^I is an alkyl or aryl group and R^{II} is an alkyl group. Preferably, R^I is CH_3 or C_6H_5 and R^{II} is CH_3 or C_2H_5 . Nano-sized silica particles having a diameter $d \leq 50$ nm may be incorporated in the network. The pigment is preferably chosen from the group formed by Fe_2O_3 , P-doped Fe_2O_3 , ZnFe_2O_4 , $\text{ZnO} \cdot \text{Fe}_2\text{O}_4$, CoAl_2O_4 , Nd_2O_5 , BiVO_4 and zirconium praseodymium silicate or mixtures thereof. The light-absorbing coating (3) of the electric lamp according to the invention is optically transparent, substantially free of scattering and stable at temperatures up to 350 °C.